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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/037,669

01/03/2002

Mark T. Feuerstraeter

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EXAMINER

NGUYEN, STEVEN H D

ART UNIT

PAPER NUMBER

2616

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

12/29/2006

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No. 10/037,669	Applicant(s) FEUERSTRAETER ET AL.	
	Examiner Steven HD Nguyen	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 and 31-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 and 31-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/11/06 has been entered.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 31-36 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter because the claimed is directed the functions for determining the flow control priority level and generating a control frame includes the flow priority level without forwarding the control frame onto the network. Therefore, the invention does not practical application because it is just an abstract idea. Furthermore, a tangible machine readable medium which does not encode with a computer program, software, a computer executable instruction or instructions capable of being executed by a computer or storing, embodied with, encoded with, having stored or having an encoded computer program Therefore, it can read as a carrier wave or punch card that has a set of instructions which is received and executed by a machine or computer.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-27 and 31-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams (USP 6957269) in view of Lee (USP 6859435).

Williams discloses a method and network interface comprising identifying a receive capability associated with one or more priority levels of Ethernet traffic for a network device (Col. 4, lines 43-55 includes queues for storing the frames, each queue corresponds to a priority of the frame, See Col. 5, lines 29-46, identifying which priority queue has capability to receive packets and which priority queue do not have capability to receive packet; then generate a control message "pause frame", includes a priority indicator which indicates all the other priorities buffer is still have capability to receive packets, for transmitting to the sender interface which suspends the transmission of packets having the same priority indicator, See col. 7, lines 49-58, col. 8, lines 13-36, See col. 9, lines 3-47 and col. 11, lines 1-22); determine a flow control priority level based on one or more of a class-of-service, a type-of-service, a quality-of-service, and a time sensitivity of the Ethernet traffic, wherein the flow control priority level denotes an identified priority level above and/or below which the network device is able to receive Ethernet traffic (See col. 5, lines 29-41, col. 6, lines 17-24, Col. 8, lines 23-36 and col. 10, lines 12-38); transmitting the generated control message to a communicatively coupled network device, whereupon receipt of the generated control message the communicatively coupled network

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device acts in accordance with the received control message to suspend a subset of Ethernet traffic (Fig 5, ref 570); the buffer for each priority level is comprised of one or more memory device(s) (Col. 5, lines 29-46); generating a control message comprises generating an Ethernet control packet including a priority field, the priority field denoting the flow control priority level (Fig 4); the priority field is included in a header portion of the Ethernet control packet; receiving Ethernet traffic; identifying a priority level associated with each packet of received Ethernet traffic; and forwarding each received packet to a receive buffer based, at least in part, on the identified priority level associated with the Ethernet packet (Col. 5, lines 29-46); monitoring the receive capability of buffers associated with each of the priority levels of Ethernet traffic (Col. 7, lines 49-58); throttling transmission of a subset of Ethernet traffic comprises temporarily suspending transmission of the subset of Ethernet traffic for a set period of time (Col. 7, lines 25-58); receiving content from a host network device for transmission to another network device communicatively coupled through an Ethernet network; and assigning a priority level to the received content based, at least in part, on a source of such Content (inherently discloses by station for generating a frame with priority); receiving content from one or more source applications executing on a host network device, the content tagged with a priority level associated with its source application; and selectively transmitting received content to another network device communicatively coupled through an Ethernet network based, at least in part, on the priority level of the content (inherently discloses) and received control message(s) throttling transmission of a subset of such Ethernet traffic (Fig 5, ref 570); a transmit buffer, responsive to a host network device and the control logic, to receive content from one or more application(s) executing on the host network device for transmission to other network device(s) through an

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Ethernet network, the received content including an indication of priority level (Inherently discloses); the indication of priority level in the received content is determined by its source application (Inherently discloses); the control logic is a media access controller (MAC) including enhanced flow control capability to implement flow control on a mere subset of Ethernet traffic (See col. 1, lines 23-40). However, Williams fails to disclose generating a control message including a flow control priority level, the flow control priority level denoting the identified priority level above or below which the network device has the ability to receive Ethernet traffic. In the same field of endeavor, Lee discloses a method and device for generating a control message including a flow control priority level which denotes the flow control priority level above and/or below which the network device has the ability to receive Ethernet traffic (Col 5, lines 62 to col. 6, lines 25, identifying the priority levels that the node still has a capability to receive more packets and generating a feedback message includes an priority level that the node has room to receive the packets has a priority greater or less than the priority level in the feedback message; See col. 10, lines 44-62, col. 11, lines 44-67, col. 12, lines 43-64 and Figs 9-10) wherein flow control priority level based on one or more of a class-of-service, a type-of-service, a quality-of-service, and a time sensitivity of the Ethernet traffic (Col. 1, lines 25-35, lines 34-36; col. 7, line 9, service priorities and col. 15, lines 63-66); determining available buffer capacity for each of a plurality of buffers associated with a commensurate plurality of Ethernet priority levels (Fig 10, Ref 1007 for determining available buffers); the available buffer capacity associated with a particular Ethernet priority level denotes the ability of the buffer to receive additional Ethernet traffic of that priority level (Fig 10, Ref 1007 for determining available buffers for receiving the packets); the buffers associated with each of the priority levels

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are virtual buffers implemented within a common physical buffer (col. 11, lines 8-20); the generated control message, being Ethernet pause frame having a priority field which uses to implement flow control after identifying the priority level, includes an indication of the priority level above which a receive buffer has available capacity to receive Ethernet traffic of an associated priority level (Col. 5, lines 62 to col. 6, Lines 25); a receiving network device initiates a pause in transmission of Ethernet traffic having a priority level below that indicated in the received control message (Col. 5, lines 62 to col. 6, Lines 25); another control message is received denoting that transmission of the subset of Ethernet traffic may resume (Col. 6, lines 9-25).

Since, Lee suggests a method and system for generating a feedback message includes a priority level for indicating the receiver still has room for the packet with a priority greater or low the priority level for transmitting to the sender can be implement in the Ethernet network. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to apply the teaching of Lee into the teaching of Williams. The motivation would have been to prevent of deadlocks and live-locks in lossless back-pressured packet network.

Response to Arguments

6. Applicant's arguments filed 9/11/2006 have been fully considered but they are not persuasive.

In response to pages 11-13, the applicant states that Williams and Lee fail to disclose a function such determine a flow control priority level based on one or more of a class-of-service, a type-of-service, a quality-of-service, and a time sensitivity of the Ethernet traffic,

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wherein the flow control priority level denotes an identified priority level above and/or below which the network device is able to receive Ethernet traffic. However, the examiner respectfully disagrees with the applicant because Williams discloses a method and system for determining the flow control priority level base based on one or more of a class-of-service, a type-of-service, a quality-of-service, and a time sensitivity of the Ethernet traffic, wherein the flow control priority level denotes an identified priority level above and/or below which the network device is able to receive Ethernet traffic (See col. 5, lines 29-41, col. 6, lines 17-24, Col. 8, lines 23-36 and col. 10, lines 12-38 discloses the Ethernet traffic is classified into a plurality of flow control priority levels wherein in each level associated with a traffic type such as multimedia, control traffic etc and using this information for controlling the flow of the traffic in the network by generating a pause frame, so flow control priority level is determined based on the class of service, type of service such as control frame or multimedia frame which is received by a node). Lee discloses a method and system for determining the flow control priority level base based on one or more of a class-of-service, a type-of-service, a quality-of-service, and a time sensitivity of the Ethernet traffic, wherein the flow control priority level denotes an identified priority level above and/or below which the network device is able to receive Ethernet traffic (Col. 1, lines 25-35, lines 34-36 disclose the flow control priority is determined by QOS in order to maintain the QOS of the network; col. 5, lines 10-25, col. 5, lines 53 to col. 6, line 8 disclose a buffer includes a plurality of thresholds wherein in each buffer threshold is represent a flow control priority level, See Fig 7, the system must monitoring the input and output of the packets into the buffer in order to determine which priority level is able to receive the packets by comparing the stored packets with the threshold in order to identify the flow control priority in order to generate a flow control

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frame, col. 7, line 9, service priorities and col. 15, lines 63-66 discloses a flow control priority level is determined based on QOS, real-time, non-real-time and service priorities traffic in order to generating a feedback message to control the flows of the network). Furthermore, a priority level is always defined by the class of service, type of service or QOS such as voice "real time", data "non real time", video "real time" etc....

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

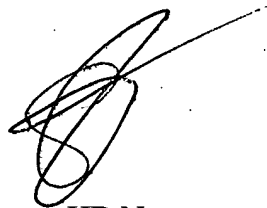
Krisna (USP 6981054) discloses a method and system for identifying the available buffer for the priority level based on the plurality of thresholds wherein each threshold represent a flow control priority level which is determined based QOS and generating a control frame to transmit to the ports of a priority level less than the flow control priority level.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven HD Nguyen whose telephone number is (571) 272-3159. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571) 272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to be 'Steven HD Nguyen', written in a cursive, stylized manner.

Steven HD Nguyen
Primary Examiner
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